

## Readiness Center Learning with Audio-Visual Media to Enhance the Competence of Early Childhood Education Teachers in Ringinarum Kendal

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### Abstract

This study aims to develop learning towards improving the competence of Early Childhood Education teachers. The object of this research was the readiness center learning model using audio-visual media. The result of development was a prototype model of early childhood education in the form of a textbook, readiness center learning, and audio-visual media. The audio-visual media in the form of a Compact Disc (CD) comprising Universe Theme for Natural Phenomena Subtheme (Flood, Earthquake, Eruption, Rain, Rainbow, Morning Day Night). The use of CD requires teachers to be able to operate computers, LCD, and projector. Therefore, teachers can enhance their competence in IT mastery. Readiness center model using audio-visual effectively increases the competence of early childhood education teachers in managing quality learning and developing achievements on cognitive and psychomotor aspects.

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## INTRODUCTION

Early Childhood Education (PAUD) is a preschool education level that takes children to a higher level of education. Learning in PAUD is learning that is applied in schools based on children's needs, oriented to children's development, playing while learning (Khotimah, 2012). This requires integrated collaboration between parents, community, and teachers as educators (Mahardika, Fakhrudin, and Suminar, 2018). At this age, children experience a golden period in growth and development. Piaget theory of child development (Munib, 2009) there are four (4) stages of cognitive development, namely motor sensory (age 0-2 years), preoperational (2-7 years), operational (7-11 years), and operational formal (11 years - adults). Following this study, children enter the preoperational stage, namely development of the ability to use symbols that describe objects are around him; thinking is still egocentric and centered.

In learning center preparation, children are prepared to enter a higher education level, namely elementary school, so students are ready to enter the cognitive development stage, namely the operational stage. At the operational stage, children can think logically, concretely pay attention to more than one dimension at a time, and can also connect these dimensions. According to Piaget (Munib, 2009) it is less egocentric, and cannot think abstractly. Therefore, the role of educators or teachers becomes very important as caregivers, mentors, and educators for students, so that children have functional mental readiness, as the key to success later. High moral quality is needed to make children successful in life at home and at school. Children need moral skills, not just academic achievement, especially in dealing with others (Pranoto, 2017).

The use of information and communication technology, allows teachers to carry out learning activities, and teach more effectively (Pranoto, Khamidun, and Rosaria, 2017). Thus the development of learning needs to be done towards increasing the competence of

Early Childhood Education (PAUD) teachers for the achievement of quality learning, and optimal learning enthusiasm (Suminar, Utsman, and Malik, 2019). The authors are interested in researching the title "Development of Learning Center Preparation Centers by Utilizing Audio-Visual Media to Improve the Competence of PAUD Teachers in Ringinarum District, Kendal Regency."

Sujiono, Y. N., and Sujiono, B. (2010) suggested several types of centers that can be applied in early childhood education institutions, including: A role-playing center (playhouse center), preparation center, art center (art center), messy play center, music center, block center, a small role-play center (micro play center), cooking center (cooking center). This research focuses on the preparation center. A center learning model is a learning approach, which in the learning process is carried out in "circles" (circle times) and play centers. According to Solikah, and Simatupang (2016) and Condrosari (2017) the development of a learning center preparation model utilizing audio-visual media can be done at the learning step of introducing words, reading stories, and saying words that use pictures, namely the fifth to seventh learning steps. This is also reinforced by research Hidayah, and Nurhadija (2018); Sari, Saparahayuningsih, and Indrawati (2019).

The selection of the right media provides a role in learning (Badriyah, 2015). The use of audiovisual learning media allows use in a variety of circumstances, places, both at school and home, and most importantly, can fulfill the value or function of learning media in general. This is in line with the results of research by Yuliyanti (2015); Setyawan (2016); Hayati, and Harianto (2017) who suggest that the media can increase student interest in learning. The results of the study are reinforced by the research of Limarga (2017); Dewi, Asri, and Tirtayanti (2017) who suggest that the use of media can improve children's abilities. A preliminary study of needs analysis at the preparatory center showed that the needs of PAUD teachers in Ringinarum Sub-district were identified with many teachers who were less competent in their fields. Many teachers

are less able to develop their abilities to improve the quality of learning so that an increase is needed in serving the world of education (Suminar, Utsman, and Malik, 2019). Also, they are less able to develop learning methods that are more creative, innovative, and varied so that students are interested in participating in each learning process. Research by Pranoto, Sugiyo, and Hong(2014); Achmadi (2016); Cahyati (2018) showed that innovation in learning makes children have high character and quality.

The above is supported by the results of preliminary observations of 20 PAUD teachers in Ringinarum sub-district, it is known that on average PAUD teachers in Ringinarum sub-district, have used the media in classroom learning, but the problem is the creation of interactive learning media by teachers. Based on the six aspects observed, the lowest results are at the point of making interactive learning media by the teacher. Only eight teachers have made interactive learning media out of twenty observers. That is, less than 50% of teachers have made their interactive learning media. The lack of teacher's ability in making learning media cannot be separated from the teacher's professional competence.

The fundamental problem that arises in learning to introduce various kinds of natural phenomena in early childhood is the lack of mixed media, and the media used are items that have been provided in the classroom so that children experience boredom. Media used in early childhood learning is needed because, with the media, children can observe so that it can bring out creativity, and develop imagination. The media used will be better if it can approach the real or original form because the child is still in a period of concrete thinking. What is seen is understood as its pure form. However, this is the obstacle because not all real objects or that resemble the original can be presented in class such as celestial objects, the process of day and night, earthquake events, and so forth. Problems in the class can be overcome by presenting audio-visual media, one of which is a learning CD (Chrystanti, and Sukadi, 2015; Solihatun, 2012).

According to Wandini (2017); Saurina (2016) audio-visual media can help teachers in the learning process without presenting real objects directly in the classroom. But it is enough to show pictures, videos, or animations that are appropriate to the material so that children can see, and understand the intended real objects. Teachers can also explore the ability of children to get to know more about the universe, and natural events/phenomena that occur, and instill moral values, and religion in children (Kristanto, 2018).

The use of audio-visual media is expected to improve the quality of learning, as well as the ability of teachers to be more creative, and innovative, and to be able to increase children's creativity and activity. Audio-visual media can also be used as an alternative media, so that learning is not boring, more varied so that it can find children's abilities in learning.

This study aims to describe learning, preparation centers, to design learning center models, produce models, and to learn media preparation centers using audio-visual media.

## METHODS

The research design uses the Research and Development method with steps including: as for the R & D research procedure scheme from Sugiono (2009) potential and problems, data collection, product design, design validation, design revision, product trials, product revision, trial run, product revision, mass product.

The research procedure is the preparation stage, the implementation phase, the data analysis stage, and the report writing stage. The research procedure is the preparation stage, the implementation phase, the data analysis stage, and the report writing stage.

The design activity begins with developing learning tools in the form of Learning Implementation Plans, Student Activity Sheets, and the development of test research instruments, then testing the learning device products and making audio-visual media consisting of lesson plan (RPP), a guidebook for the implementation of the learning center preparation model, learning

evaluation tools in the form of Teacher Activity Sheets (LAG), and audio-visual media tests.

As for product validation from experts, that in the first validation activity, there were still found various deficiencies or could not be said to be valid, it still needed revisions to improve the product. Input or suggestions from expert lecturers, and practitioners, among others, aspects of the design of the display are too plain to be colored with dancing, the audio aspect of the sound is not heard correctly, the video aspect of lighting is lacking, the animation aspect is quite adequate and needs further improvement, the ease of use of the media is good enough, and can be used. Then a second revision was made of all aspects which were of suitable value and could be used.

Data collection methods using interviews, observation, and documentation (Sugiyono, 2012). Data collection instruments used in this study were questionnaires, teacher activeness sheets, student activity sheets, and tests. Wilcoxon data analysis is used to determine the effectiveness of learning center preparation using audio-visual.

## RESULTS AND DISCUSSION

The PAUD learning model before development was the competence of 5 teachers in utilizing information and communication technology media in learning, which was still lacking. The rarity of learning to evidence this by using information technology media. Limited skills in the use of information and communication technology become a separate issue in developing learning models in the classroom. This is in line with research conducted by Sofyan, Wiryotinoyo, and Sudaryono, 2011).

An example is a use, utilization, and optimization of computers. Three out of five teachers who can only be said to be able to operate computers, while the rest are still unable to operate computer programs, due to limited skills possessed. The application of learning media using audio-visual is an alternative that is expected to influence motivation (Purwono,

2014) student interests and improve student achievement (Khanifah, and Susanto, 2014).

The design of learning models developed at the preparation center is to use audio-visual media, which contains themes of natural phenomena, universal sub-themes.

The effectiveness of learning center preparation model with audio-visual media can be assessed, as follows: results of a questionnaire conducted by several teachers from activities before and after using media. Data collection techniques using techniques: interviews, observation, and documentation. Data types include validation sheets for lesson plans, and RAB teacher activity sheets, interview questionnaire for students, and teachers, questionnaire for retrieval, teacher activity data in learning, observation, and documentation observing student activities.

**Table 1.** Results of Teacher's Opinion  
Questionnaire on Audio-Visual Learning Model

| Assessment aspects         | Score |       |
|----------------------------|-------|-------|
|                            | First | Final |
| Participation              | 57    | 70    |
| Learning atmosphere        | 34    | 60    |
| Implementation of learning | 42    | 47    |
| Time efficiency            | 53    | 73    |
| Right on target            | 45    | 61    |
| Learning materials         | 52    | 75    |
| Effectiveness of learning  | 50    | 73    |
| Total                      | 333   | 459   |
| Average                    | 47.57 | 65.57 |

The application of the audio-visual media learning model involved seven teachers as respondents from a total of 20 teachers in the Ringinarum Subdistrict. Stages in testing the effectiveness of the learning model in improving teacher competency through the stages of testing, and measuring effectiveness using a questionnaire.

Wilcoxon test calculation results show a significance level of  $0.018 < 0.05$ . Thus it is stated that there are differences before and after learning.

Based on Table 1 can be known the initial average value = 47.57 while the final = 65.57 because the final grade = 65.57 > first grade = 47.57, it can be stated that there is an increase in the teacher's ability to use the learning center, preparation model. So the conclusion is the

preparation center learning model can improve the competence of PAUD teachers.

The use of audio-visual media in learning is not directly used at the beginning of learning. Learning activities begin with storytelling and conversing about several types of natural phenomena that commonly occur (Febiharsa, and Djuniadi, 2017). Children look enthusiastic about the story, so they give feedback with various questions. Starting from the question "why is it raining?" Why is there a flood? ", Why is there a landslide?". Based on some questions raised by the child, the teacher gives simple answers according to the level of reasoning of the child. After the answers are given to the child, the teacher starts to play a video about natural phenomena. The material or sub-themes that are played adjust to the ongoing schedule.

Of the 17 respondents, after learning the video was played the children were very interested and were enthusiastic about seeing, listening, and doing the tasks according to the instructions of the video. Data from the questionnaire provided by 80% of children were happy with the video activity. Children become more familiar with the occurrence of natural phenomena that often occur around.

The first question and answer were intended as a pre-test; the number of 17 children obtained an average of 4.8 learning outcomes from a maximum score of 9. The next question and answer were intended as a post-test, a total of 17 children obtained an average of 8 learning outcomes. This can be seen in Table 2, below the comparison of pre-test and post-test values can be seen in Table 2.

**Table 2.** Results of Questions and Answers for Students in the Audio-Visual Learning Model

| Rated aspect                | Score    |           |
|-----------------------------|----------|-----------|
|                             | Pre-test | Post-test |
| Learning component          | 4        | 7         |
| Learning interactions       | 6        | 9         |
| Learning theme              | 4        | 7         |
| Vocabulary ability          | 5        | 9         |
| Learning atmosphere         | 4        | 7         |
| Learning response           | 5        | 9         |
| Multimedia evaluation       | 4        | 8         |
| Teacher's attitude          | 5        | 9         |
| Learning atmosphere         | 4        | 8         |
| Learning theme              | 4        | 8         |
| Multimedia sound            | 4        | 8         |
| The way the teacher teaches | 7        | 9         |
| Media used                  | 4        | 7         |
| Multimedia display          | 5        | 8         |
| Writing in multimedia       | 5        | 7         |
| Right on target             | 7        | 9         |
| Safe for children           | 5        | 7         |
| Average                     | 4.82     | 8.00      |

Based on Table 2, it can be seen the pre-test = 4.82 while in the post-test = 8.00. Because of the initial value = 4.82, and the final value = 8.00. Then it can be stated that there is an increase in children's ability to carry out learning center preparation with audio-visual media. So the conclusion is that learning center preparation using audio-visual media can improve children's learning outcomes.

This is following research by Oktaviani, and Ray (2017); Hijriyani (2018); Liyana, and Kurniawan (2019). The cognitive ability of students increases, after the preparation center learning model is carried out, and this is indicated

by the child's ability to answer questions given by the teacher. Improved students' motor skills are shown by the child's ability to learn while playing using audio-visual guided by the teacher.

The use of the learning center preparation model by utilizing audio-visual media can improve the competence of PAUD teachers and enhance the effectiveness of early childhood learning.

## CONCLUSION

The application of learning models before development is still not varied; learning is not

attractive, less effective, and only relies on existing media. Therefore we need a design model that can increase children's interest in learning, and the creativity of the teacher so that learning is more exciting and attractive to children. Based on some input from media experts and practitioners, then comes the preparation center learning media that utilize audio-visual media, so that formed a design learning model that was developed into an attractive design model.

In line with the development of technology and information, then the teacher is required to be able to adjust to these changes, including using audio-visual in learning. The results of research with learning center preparation models using audio-visual shows that this model is effective in increasing teacher professional competence.

The model used in learning by utilizing audio-visual media is very useful because children are very interested and enthusiastic about carrying out learning activities so that students' cognitive and psychomotor abilities increase.

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